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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,026	07/25/2003	Xin Simon Luo	50522/PAN/E349	3368
23363	7590	09/28/2006	EXAMINER	
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			JEAN BART, RALPH	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,026

Applicant(s)

LUO ET AL.

Examiner

Ralph Jean-Bart

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07/25/2003.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

In one particular embodiment of a wavelength Stabilizer detector unit is illustrated in figure 3 (see paragraph 0041 lines 1-2). In figure 2 item 206 designated as a detector is a wavelength detector unit (paragraph 0035 lines 3-6).

In conclusion the entire figure 3 is equivalent to figure 2 items 206.

2. Claims 1-4, 6-7, 11-18, 20-21, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hedin et al (Pub. No.: US 2003/0108071).

3. With respect to claims 1, 12, and 15, Hedin teaches an apparatus and method for laser communication device (see abstract), a laser diode emitting an optical transmission beam (see figure 2 laser 202, light beam 204); a reflective mirror that reflects a first portion of the optical transmission beam to an end face of an optical fiber (see figure 3 beam splitter 312' output fiber 322); and an edge illumination monitor photo detector (see figure 2 detector 206), having a light receiving facet that receives a second portion of the optical transmission beam (see figure 3 elements 332, 334), the monitor photo detector producing a control signal as a function of the received second

portion of the optical transmission beam (see figure 2 detector 206, analyzer 212 and control 216; paragraph 0038 lines 5-10).

4. With respect to claims 2, 14 and 16, Hedin teaches a focusing lens optically coupled to the reflective mirror for focusing the reflected optical beam into the end face of the optical fiber (see figure 3 focusing lens 320, end face fiber 322; paragraph 0043).

5. With respect to claims 3 and 17, Hedin teaches the laser diode comprises an edge-emitting laser (see light emitting laser paragraph 0036 lines 1-2 as indicated in applicant's specification see also paragraph 8 lines 14-15).

6. With respect to claims 4 and 18, Hedin teaches the laser diode and the reflective mirror are coupled to a TO header (as applicant's specification a TO header is a base or support for the laser and the mirror which is similar to Hedin reference see figure 2 housing 226 which provides a base or support for the laser 202 and the reflective mirror 312), and wherein the reflective mirror is swept at an angle to reflect the first portion of the optical transmission beam to the optical fiber (see paragraph 0087 lines 1-8).

7. With respect to claim 6 and 20, Hedin teaches the light receiving facet of the edge illumination monitor photo detector is swept at an angle relative to the TO header (see Fig 3 elements 312, 332, the beam splitter is at an angle).

8. With respect to claims 7, 13, and 21, Hedin teaches a gain stage (see figure 2 analyzer 212) coupled to the edge illumination monitor photo detector (see figure 2 photo detector 332, pixels 334, and analyzer 212) that converts the control signal to a voltage proportional to the power of the optical transmission beam (see figure 2 power supply 220; paragraph 0038) and a control that compares the voltage to a reference

voltage and adjusts drive power of the laser diode in accordance with the comparison (see figure 2 control signal 214, power supply 220; see claim 19).

9. With respect to claim 11 and 24, Hedin teaches the reflective mirror comprises a silicon reflective mirror (As applicant's specification, the reflective mirror comprises silicon or any other suitable material. Hidden teaches the reflective mirror is formed with other suitable material such as plastic, see Hidden paragraph 0042 lines 9-14).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiden (Pub. No.: US 2003/0108071) in view of Deines (Pub. No.: US 2004/0109155).

12. With respect to claims 8 and 22, all the limitations of these claims have been discussed in claims 2 and 16 above. Hiden fails to teach a laser diode isolator disposed between the focusing lens and the optical fiber.

13. However, Deines teaches teach a laser diode isolator disposed between the focusing lens and the optical fiber (see figure 2 laser 660).

Art Unit: 2631

14. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the laser wavelength stabilization of Hedin in order to reflected the laser signal to the detector, and, further to split laser signal toward the collimator and to receive and route the reflected signal toward the detector as taught by Deines (see Deines paragraph 0021).

15. Claims 5, 9, 10, 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiden (Pub. No.: US 2003/0108071) in view of Heiney (US 6,925,256).

16. With respect to claim 9 and 23, all the limitations of these claims have been discussed in claims 1 and 15 above. Hiden fails to teach the monitor photo detector comprises a p-i-n photo detector.

17. However, Heiney teaches the monitor photo detector comprises a Fabry Perot p-i-n detector filter (see column 3 lines 34-37).

18. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the laser wavelength stabilization of Hedin by incorporating a p-i-n photo detector in order to reduce the cost of the transmission and reception systems as well as the difficulty associated with alignment of the optical system as taught by Heiney (see Heiney column 1 lines 60-64).

19. With respect to claims 10, all the limitations of this claim have been discussed in claim 1 above. Hedin fails to teach the monitor photo detector is coupled to the reflective mirror.

20. However, Heiney teaches the monitor photo detector is coupled to the reflective mirror (see figure 1 filter 50, absorbing region 20 acting as a receiver; column 2 line 59-column 3 line 21).

21. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the laser wavelength stabilization of Hedin by incorporating a monitor photodetector which is coupled to the reflective mirror in order to provide a uniquely compact and efficient system that is more economical and easy to manufacture as taught by Heiney (see Heiney column 2 lines 25-28).

22. With respect to claims 5 and 19, all the limitations of these claims have been discussed in claims 1 and 15 above. Hiden fails to teach teaches the reflective mirror is swept an angle in the range of about 43-47 degrees relative to the TO header.

23. However, Heiney teaches an angle of about 45 degrees relative to the TO header (see column 4 line 65 – column 5 line 4)

24. Therefore, It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have modified the system of Hiden by incorporating an angle of 45 degrees in order to provide a uniquely compact and efficient system that is more economical and easy to manufacture (see Heiney column 25-28).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ralph Jean-Bart whose telephone number is (571) 270-1017. The examiner can normally be reached on Monday to Thursday from 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ralph Jean-Bart

09/20/2006


KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER